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Translation of Chinese Utility Model Application CN 2493924Y

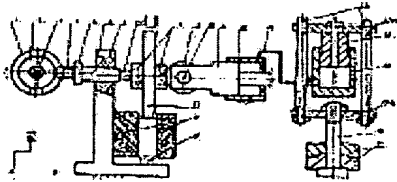
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- [21] Application number: 01 239 850.0
- [73] Designation of the owner: "Zhengzhou Jixie Yanjiusuo" Research Institute for Mechanical Engineering - Zhengzhou)
  
- [54] Title of the invention: Low-load fatigue testing device
  
- [57] Abstract: The following utility model pertains to a low-load fatigue testing device, a top dead centre B as well as a bottom dead centre A being provided on an eccentric-load device. When the eccentric axis switches from bottom dead centre A to top dead centre B, the load locus of the specimen shifts to the right. Simultaneously when carrying out this half-load cycle, the supporting piston is moved to the right, and the oil in the supporting oil tank is pressed through the oil line into the energy-storage oil tank. Simultaneously with the lifting and lowering of the supporting piston, the weight is lifted up to the highest capacity of energy storage. When the eccentric axis returns from the top dead centre B to the bottom dead centre A, weight and energy-storage piston are lowered so that the support-

ing piston shifts the load locus of the specimen to the left until the eccentric axis reaches the bottom dead centre A. A cycle has thus been carried out. When this process is repeated until the specimen breaks, a fatigue test of the specimen has been accomplished.

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#### Claims\*

1. A low-load fatigue testing device comprising a driving axle, an axle bearing, an eccentric axis, an adjustment wire, a female screw, a driving rod, a mount, a steel ball, upper clamping means, an axle bearing, an axis, a supporting piston, an energy-storage oil tank, a specimen, lower clamping means, a branch part, an oil line, a cantilever, a crossbar, an energy-storage piston and an energy-storage-oil tank-weight, characterized in that a T-shaped groove is provided on the upper face of the driving axle (1), the eccentric axis (3) being mounted in the above-designated T-shaped groove; that the axle bearing (2) is provided at the end of the above-designated eccentric axis (3), the outer ring of the above-designated axle bearing (2) being connected to one end of the driving rod (6) via the adjustment wire (4), the above-designated driving rod (6) being

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\* Translator's note: in the original no articles are used, but these have been included here.